



4210 East 11th Avenue
Denver, Colorado 80220-3716
Phone (303) 320-8333

53/34
Telefax Numbers:
Main Building/Denver
(303) 322-9076

Ptarmigan Place/Denver
(303) 320-1529

First National Bank Building/Denver
(303) 355-6559

Grand Junction Office
(303) 248-7198

Pueblo Office
(719) 543-8441

ROY ROMER
Governor

JOEL KOHN
Interim Executive Director

February 3, 1992

Mr. Scott Grace
DOE-Rocky Flats
P.O. Box 926
Golden, Colorado 80402-0928

Dear Mr. Grace:

I am representing the Air Pollution Control Division of the Colorado Department of Health as reviewer of the "Technical Memorandum 5-Addendum to Final Phase II RFI/RI Workplan-Surface Soil Sampling and Analysis Plan." While I expressed my concerns at the January 28, 1992 meeting, these comments journalize my review.

- (1) The Division believes that altering the soil sampling scheme to restrict samples to the top layer as suggested by Al Hazel is a necessary step. This will reflect true surface soil exposure.
- (2) The Division agrees with the proposal to collect PM10 and TSP samples for total mass and to estimate metals and other contaminate concentrations by a mass/ratio technique. This should provide a reasonable method for estimating exposure concentrations for the initial risk evaluation.
- (3) The Division believes the sampling scheme--to collect 4 sites data--is adequate to characterize local concentrations.
- (4) The Division strongly believes that four days worth of 8-hour sampling is inadequate to provide representative concentrations. The variability in mass concentrations is log normally distributed: It is expected that "typical worst case" concentrations are needed to perform a fair exposure modeling exercise. The variability of meteorological conditions, soil moisture and other parameters can make these concentrations non-representative if collected over the wrong period.

RECEIVED
U.S.D.O.E.
R.F.O. MAIL ROOM
1992 FEB 10 A 8:20

ADMIN RECORDS

A-DU01-000858

MHS
20

PRINTED ON RECYCLED PAPER

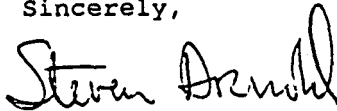
We suggest the sample number be stastically chosen based on historical, particulate measurement variability at the existing R.F. samplers.

- (5) The Division believes that the VOC/pesticide exposure during soil removal could be an issue not well characterized by the soil/air sampling methods described. Specifically, during soil removal, exposure concentrations are expected to be significantly different when sub-surface soils are exposed. While we are not suggesting addition of these parameters to the initial soil sampling plan, the RFI/RI exposure analysis should address this exposure pathway.
- (6) We believe Figure 1-6 should be modified to show a dotted line between "airborne" transport media and the "leaching" line to indicate that airborn transport off site often turns into human consumption through pica or other contact.

Generally, the statment in 2.1.5 indicating the significance of the air exposure route, does not seem to be reflected in the amount of consideration given to establishing these air exposure concentrations. Worst case, or even representative average exposure, will not likely be represented by the suggested sampling plan. Increasing the number of samples, with a statistically appropriate post-treatment of the data, could significantly improve this portion of the work.

If you have any questions about these comments please contact me at 331-8516.

Sincerely,



Steven Arnold
Program Manager
Technical Services Program
Air Pollution Control Division

SA/cs

cc: W.P.4.6A
Nancy Chick
Dennis Smith
Janell Beyman
Barbara Berry
Al Hazel
Dick Fox

0926i/20-21